

ORIGINS

Galaxies, Stars, Planets ...and Life.

Education & Public Outreach

Ian Griffin

Head

Office of Public Outreach

Space Telescope Science

Institute

2001 July 12th

The Origins Education Forum

Origins Education Forum

EDUCATION



Director: Terry Teays
Manager: Carole Rest
Forum Scientist: Denise Smith

Rolf Danner
Nancy Leon
Michelle Thaller
Mike Bennett
Luciana Bianchi
Krisstina Wilmoth
Steve Dick
Ian Griffin

Space Science Education Resource Directory

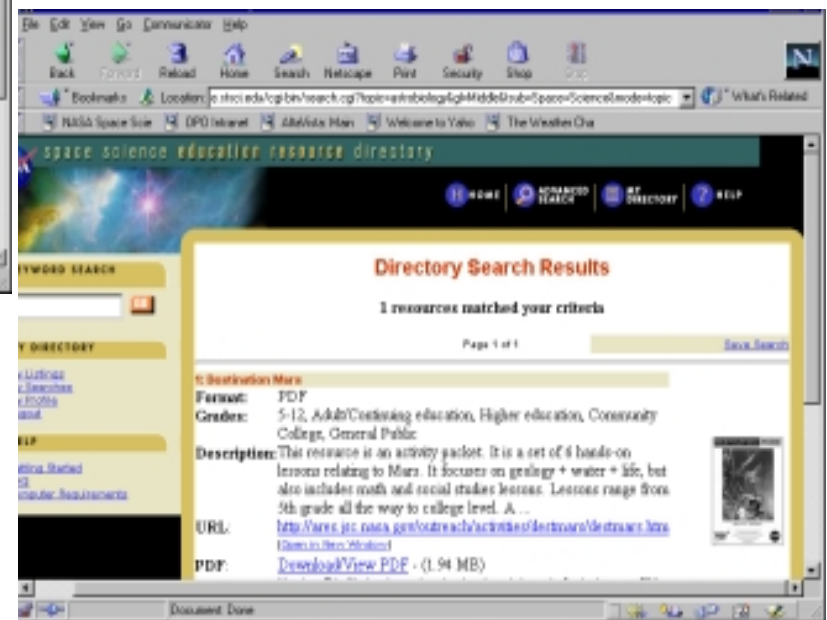
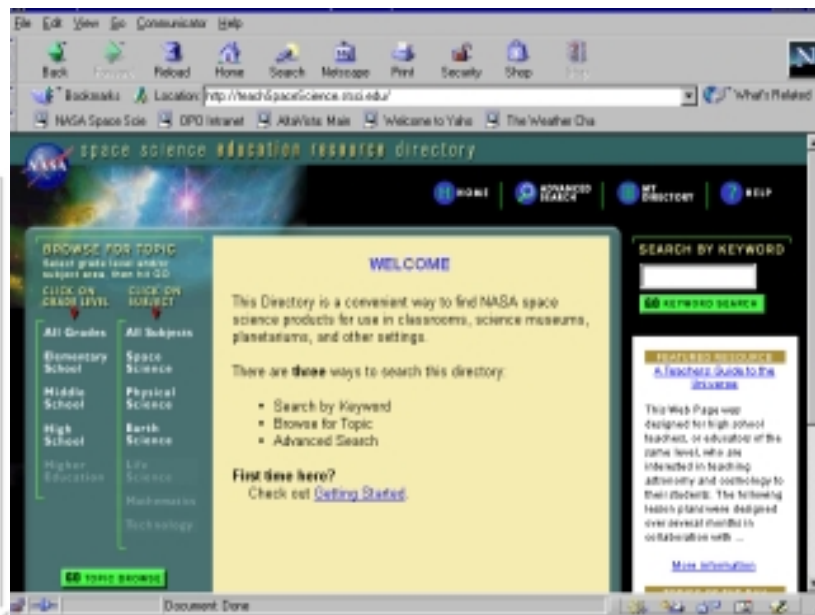
October 2, 2000 debut as scheduled



Teachers using the NASA Space Science Education Resource Directory can easily locate and download materials for use in their classrooms.

Space Science Education Resource Directory

Developed in collaboration with other Forums,
especially SECEF



Space Science Education Resource Directory

Designed to be compatible with nationally recognized education resource databases:

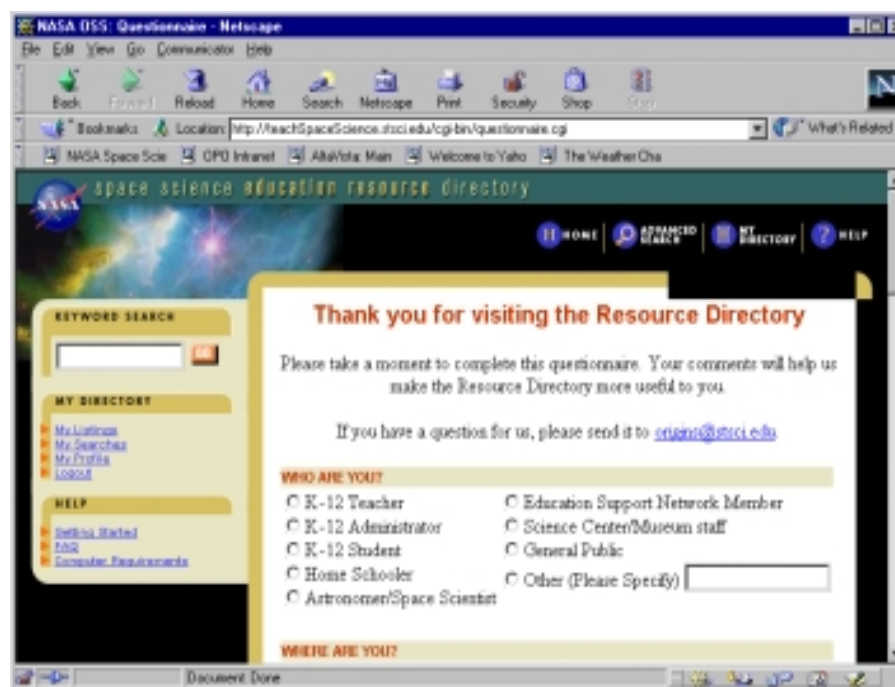
- Dept. of Ed Gateway to Education Materials (GEM)
- Eisenhower National Clearing House (ENC)
- NASA Space Link
- Etc.



Space Science Education Resource Directory

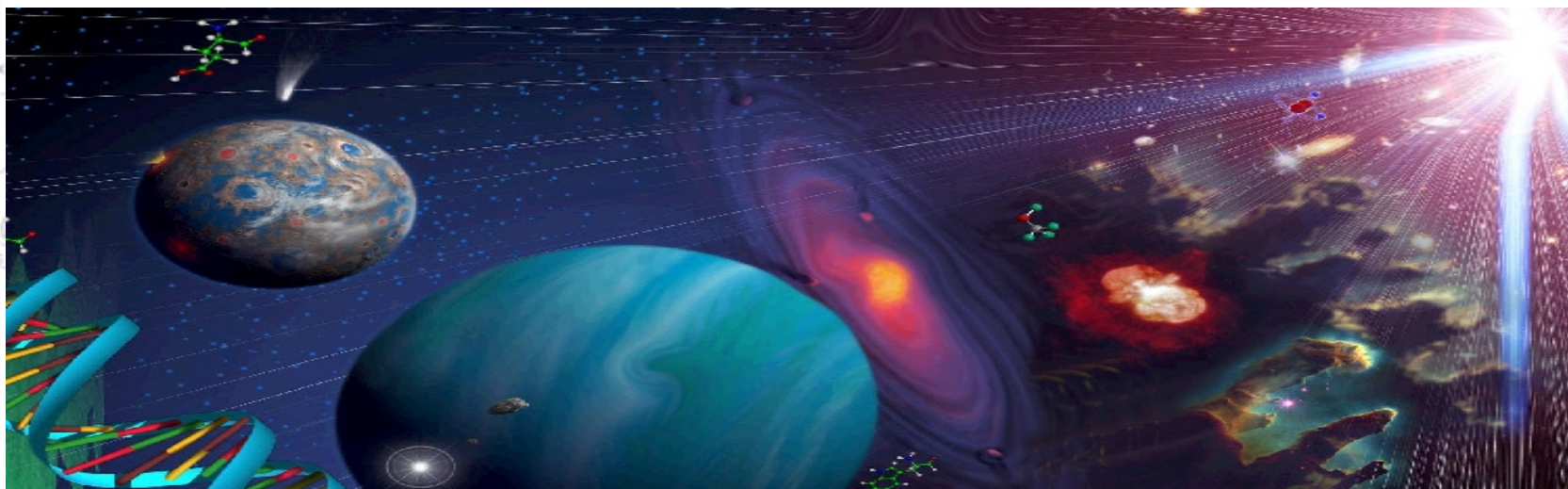
Designed based on user feedback:

- Testing at large national teacher conferences
- Usability lab testing in Palo Alto, CA
- Focus groups
- On-line surveys



Space Science Education Resource Directory

- Resources entered in the Resource Directory vetted for scientific accuracy by Forums
- Plans for 1st annual OSS external product review underway
 - Scientific and pedagogy review
 - Product “seal of approval” in SSERD
 - Based on Earth Science model
 - Space Science Education Resource Directory
- Currently testing enhanced product registry using 2 test resources from each Forum
- Developed comprehensive registry user’s manual
- If needed, training workshop for Forum Directory Coordinators



Future enhancements:

- Faster, easier to use product registry, May 2001
- User comments (ala Amazon.Com), October 2001
- Instant email alert of new products, October 2001
- “One stop shopping”
- New subjects
 - Life Sciences
 - Mathematics
 - Technology



ORIGINS FORUM EVALUATION SERVICE

Saving Time & Money by Doing It Right the First Time

- Any Origins mission may submit a product in development for a detailed review by experts on the Forum staff
- Evolved from the processes developed for reviewing HST materials
- To date, the service has been used by SIM, SIRTF, SOFIA, NAI, HST & FUSE



MEETING SUPPORT

Reaching Our Customers Where They Gather

- Supporting the Office of Space Science at key meetings such as
 - National Science Teachers Association
 - National Council of Teachers of Mathematics
 - American Association of Retired Persons
 - Association of Science-Technology Centers
 - AAAS
 - AAS
- Staffing booths, giving workshops, disseminating materials
- Minority University Initiative Workshop



MAKING CONNECTIONS

- Examples of the Forum connecting people, missions, and institutions to foster collaborations and leveraged activities
 - Connecting FAME E/PO team with Space Place (network of small libraries)
 - Connecting the Origins Forum missions with Tom Levenson, who is creating a PBS series on the Origins theme
 - NAI producing a CD-ROM for this year's NSTA meeting, which contained PDF files from all of the missions
 - SOFIA & SIRTf collaborating with Montana State University on an Internet teacher training course
 - Use of NASA OSS Data: an E/PO perspective
 - Paper presented by Terry Teays and Cassandra Runyon to the *Space Studies Board National Academy of Sciences* January 31, 2001





FUSE

<http://fuse.pha.jhu.edu/outreach>

Maryland Science Center Events

Lesson Plans

Teacher Workshops & Internships

Doing Stuff!

FAME

<http://aa.usno.navy.mil/FAME/>

Developed a comprehensive E/PO plan, which includes:

Curriculum support products

a master teacher program

small planetarium program

workshops at science & education conferences



SIRTF

http://sirtf.caltech.edu/SSC_EPO.html

Video

Herschel Experiment

IR Universe poster

Website

NAI, HST & SOFIA



<http://nai.arc.nasa.gov/>



HST

<http://hubble.stsci.edu/>

SITES exhibit

ViewSpace

Heritage

HubbleSite

Hubble Minute



SOFIA

<http://sofia.arc.nasa.gov/education/index.html>

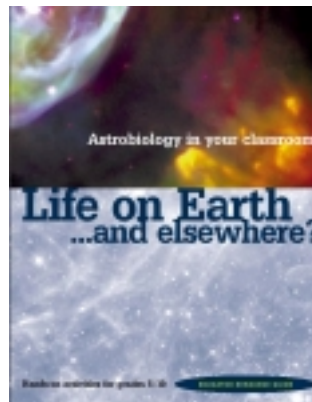
Continuing improvements to web site

Support UAL in-flight video and web site

Creation of on-board physical facilities for EPO

Planning for EPO during operations

Teacher Guide



SIRTF & SOFIA have partnered with MSU-Bozeman to develop on-line teacher's course in 'Origins Astronomy'



Navigator (Keck, SIM, StarLight, TPF, ISC)

Space Science for All Americans

Navigator Program develops focus on under represented groups.

Navigator Program (Keck Interferometer, StarLight, SIM, TPF) are developing educational plan focussed on minority students.

Navigator Team supported JPL's participation in LA's Better Educated Students for Tomorrow (LA BEST) initiative (sponsored by the mayor of Los Angeles).

Team supported Code S Minority Initiative Conference in Washington DC to build a working relationship with Historically Black Colleges and Universities and Tribal Colleges working with JPL Urban Outreach Programs.



Scenes from LA BEST.

Keck Interferometer Reaches Technology Teachers

Space Place receives national recognition

Space Place curriculum supplement on nulling published in the International Technology Education (ITEA) Technology Teacher magazine in February 2001.

ITEA presented Space Place with its Presidential Citation at their national conference in recognition of the nulling and other contributions.

Space Place newspaper column is published in five major newspapers: (Los Angeles Times, Denver Post, Dallas-Fort Worth Star Telegram, Columbus Dispatch, and Hartford Courant.)



Michelson Fellowship Program

Supports young researchers in optical and infrared interferometry

Graduate Student Fellowships

David Berger
Douglas Hope
Alice Liu
Yuan Liu
Philip Hinz
Ben Lane
Erin Sabatke
Chad Ogden
Rebecca Mardolon

Georgia State University
University of New Mexico
Massachusetts Institute of Technology
State University of New York
University of Arizona
California Institute of Technology
University of Arizona
Georgia State University
Massachusetts Institute of Technology

Annual Summer School

Supports 30-50 students plus over 20 presenters each year ('99, '00, '01).



Proceedings are published in hard copy, on CDROM and on the Internet.



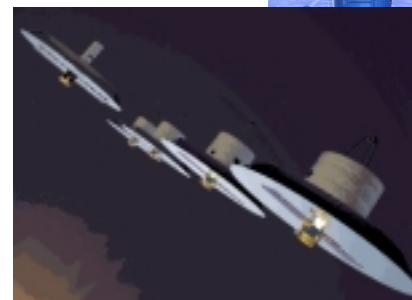
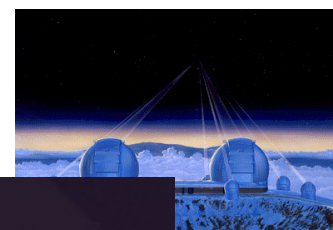
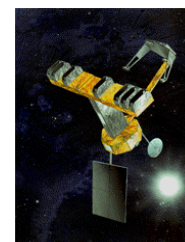
Post-doctoral Fellowships

Jean-Philippe Berger
Marc Kuchner
Maclei Konacki
Rafael Milan-Gabes
Sam Bagland
Philip Hinz

Harvard-Smithsonian CfA
Harvard-Smithsonian CfA
California Institute of Technology
Harvard-Smithsonian CfA
Harvard-Smithsonian CfA
University of Arizona

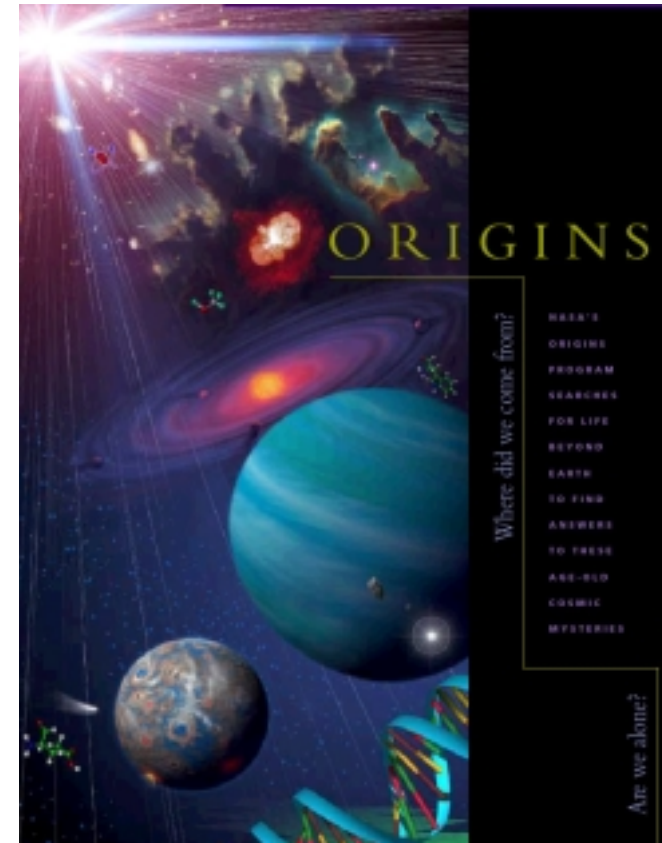
Undergraduate Research

Interdisciplinary team of students at Harvey Mudd College.



UPCOMING PROJECTS

- Develop work package with PBS Origins producer Tom Levenson to define support from the Origins Forum
- Develop 'The Origins Story' brochure & Video
- Define Plans for an Origins travelling exhibit, possibly in collaboration with the PBS Origins program.



Origins forum members are partnering to develop effective outreach that shares scientific knowledge of the universe in ways that inspire, excite, challenge and educate.